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Editorial

The continuing shortage of teachers in Alberta and elsewhere warrants stern attention to this problem by research groups. Obviously there are two kinds of solution: attracting into our teacher-education institutions the greatest possible number of qualified candidates, and retaining as many as possible in the schools once they have been prepared. These are, of course, complementary rather than alternative. Our present issue reports in a preliminary way upon both of them.

The bearing of the Ackroyd-Roberts study upon the problem is indirect. Setting out to determine for a given year (1949) the post-school occupations of Alberta high-school graduates with university entrance standards, the investigators found that of those who came to the University the Faculty of Education enrolled slightly more than one-quarter, and almost half of the women. These figures suggest a question about the proportion of university students which the Faculty of Education may reasonably hope to attract in competition with other faculties. They suggest the further question of how many and what kind of high school graduates with university matriculation can or should be drawn to the university in competition with industry, the trades, and other occupations. The writers recommend an improved scheme of public relations, together with various kinds of financial assistance.

Murray's study, "An Investigation of the Annoyances and Frustrations which Cause Alberta Teachers to Quit Teaching," bears directly upon the problem of retention. Not all teachers, of course, leave teaching because of "annoyances and frustrations": for many women it is but a random step toward marriage, while for men it is often a planned step toward a preferred career. It should further be recognized that no significant job is likely to be without annoyances and frustrations—least of all teaching. What the study makes clear, however, is the nature of the main dissatisfactions. Some ten of these are identified: notably poor living and working conditions, excessive enrolments, inadequate salaries, low prestige, and social restrictions.

The important practical question that arises from Murray's study is whether or not these dissatisfactions, individually or in sum, are *necessary* or preventable. What can be done, or what *more* can be done about their identifiable causes? Which, if any, are basic and which are merely correlative? In short, what most needs to be done to staff our classrooms with good teachers?

To the latter question Murray's respondents replied overwhelmingly that the salaries of teachers must be raised and that the minimum qualifications for teachers must be improved. This is by no means a new answer. Those charged with the responsibility of staffing our schools may well attend to its reiteration by a group well qualified to speak.

A STUDY OF THE SELF-CONCEPT AND IDEAL-CONCEPT IN ADOLESCENCE

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Introduction

Current psychological literature shows a renewed concern with the *self* as a legitimate subject for psychological study. By the *self* is meant the "subjective self as it is perceived, conceived, valued and responded to by the individual himself."[1] The importance of the self in educational psychology is clear when one considers the influence of the school upon the formation, and to some extent the fixation, of attitudes, interests, aspirations, values and ideals. All of these are implicit in the individual's *self-concept*—the person he actually conceives himself to be, or in his *ideal-concept*—the person he would most like to be. Jersild points to the importance of the study of the self by educators: "There is a need of staggering magnitude for doing something in our educational program to help children and youth acquire realistic attitudes of self-acceptance."[2] Lecky has commented on the need for change in the self-concept if growth is to take place during the educative process. This author was given a striking illustration of the effects of resistance to change by an intelligent student who is deficient in spelling.

> The resistance arises from the fact that at some time in the past the suggestion that he was a poor speller was accepted and incorporated into his definition of himself, and is now an integral part of his total personality. This dificulty is thus explained as a special instance of the general principle that a person can only be true to himself. If he defined himself as a poor speller, the misspelling of a certain proportion of words which he uses becomes a moral issue. He misspells words for the same reason that he refuses to become a thief. That is, he must behave in a manner consistent with his idea of himself.[3]

In the allied field of Vocational Guidance, Super has written that "in choosing an occupation one is, in effect, choosing a means of implementing a self-concept."[4]

The primary aim of the present investigation was to develop a *forced-sort* device for sampling the self-concept and the ideal-concept, and, using this instrument, to study the relation between these variables for a group of adolescent students. Secondary aims included the investigation of sex differences in the *self-ideal*

1Percival W. Symonds, **The Ego and the Self,** p. vi.

2Arthur T. Jersild, **In Search of Self,** p. 5.

3Prescott Lecky, **Self-Consistency,** p. 140.

4Donald E. Super, "Vocational Adjustment: Implementing a Self-Concept," **Occupations** (1951), p. 92.

relationship, and the study of the concern and dissatisfaction associated with various areas of the *perceived self* in adolescence.

Sampling the Self-Concept and the Ideal-Concept

"Q-technique" was used to estimate the degree of relatedness between the self-concept and the ideal-concept for a group of adolescents. This was accomplished by having each of the subjects sort a set of 51 self-descriptive statements into eleven categories ranging from "Most True" to "Least True." The steps in the procedure were roughly as follows:

1. Each subject was given a set of 51 cards on which were printed self-descriptive statements such as
   "I have a hard time solving problems."
   "I have a good sense of humour."
2. Each subject was given a distribution chart consisting of 51 rectangles large enough to fit the cards. The rectangles were arranged into eleven columns numbered from *0* on the left to *10* on the right as follows:

Column Number	0	1	2	3	4	5	6	7	8	9	10
Number of Rectangles	1	2	4	6	8	9	8	6	4	2	1

   Immediately above Column 0 was printed "Least True", and above Column 10 was printed "Most True."
3. The subjects were instructed to place the statement which was least true of themselves in Column 0, and the statement which was most true in Column 10. The remaining statements were to be arranged so that the greater the truth of a statement the further it was placed to the right, and the less its truth the further it was placed toward the left, with only one card in each rectangle.
4. After all the statements had been positioned on the chart, the subjects were instructed to record the identification numbers of the statements on the chart spaces underneath.

The procedure was carried out twice. On the first sort, the subject judged the truth of each statement relative to his actual conception of himself. On the second sort, the truth of each statement was judged relative to the subject's ideal-concept: "the person he would most like to be." The number of statements permissible in any given *truth category* (column) was rigidly set to make the frequencies of statements approximate, as closely as possible, the normal frequency distribution. By forcing the distribution of statements to be approximately normal, the necessity for an assumption about the form of the distribution was obviated.

Theoretical considerations suggested that a given self-descriptive statement could be classified as reflecting a positively or negatively directed awareness, feeling or valuation of some aspect of the body, bodily processes, mind or mental processes of the individual. The statements were constructed to form a stratified sample which was

representative of the theory. The scheme followed was essentially that suggested by Stephenson.[5]

By the procedure described above, a sample of the self-concept and the ideal-concept was obtained for each subject in the experimental group. For instance, let us suppose that Subject A placed the statement "I have a good sense of humour" in Column 2 on the self-sort, and in Column 9 on the ideal-sort. This would mean that he did not consider himself to have a particularly good sense of humour, but that he would like to have one. We should say that he exhibited low self-acceptance on this particular item. The numerical difference of seven between the column numbers for this statement is indicative of the degree of dissatisfaction which he feels toward his sense of humour. It is also possible to quantify the concern which he feels for this item by considering the column in which it was placed on the ideal-sort. An item placed in Column 5 on the ideal-sort would suggest indifference, in that the subject did not particularly care whether or not the item should be true of "the person he would most like to be." Thus displacement from Column 5 on the ideal-sort indicates the degree of concern which the subject feels for the statement. In the example given above, we should say that Subject A exhibited a concern of $9 - 5 = 4$ for "sense of humour." Thus for each subject we have, in the raw data, 51 pairs of numbers corresponding to the 51 statements in the sort. Each pair consists of one number giving the column or *truth category* of a statement on the self-sort, with the other giving the corresponding column on the ideal-sort. Presumably a person who is satisfied with himself, or who accepts himself, will have pairs of numbers which are close together; whereas persons with low self-acceptance will have pairs of numbers which exhibit little correspondence. It will be apparent that the 51 pairs of numbers for each subject lend themselves to correlative analysis, and that a resulting high coefficient of correlation would correspond to high self-acceptance, and conversely.

Administration of the Sorts

In the latter part of January, 1955, the forced sort described in the preceding section was administered to five classes of adolescent students. One of these was a grade IX class in an Edmonton Junior High School. The other four were Grade X classes in a large Edmonton Composite High School. Raw data were obtained for 104 of these students, 62 of whom were boys, and 42 of whom were girls. The ages of these students ranged from 12 years 9 months to 18 years 7 months, with a mean age of 15 years 8 months.

[5]William Stephenson, "Some Observations on Q-technique," **Psychological Bulletin** (1952), pp. 483-498.

Although no specific efforts were made to randomize the sample of students, it is felt that they represent a fairly typical cross-section of adolescent students in the City of Edmonton. Inasmuch as scholastic ability may affect the variables of the present study, the grade IX group may be considered as being biased toward higher ability since it was the highest of five ability-grouped classes in the school from which it was taken.

The sorts were conducted during the regular class periods of a course in Health and Personal Development, by the teachers of this course. One period was taken for the administration of the self-sort, and a second period (about a week later) for the ideal-sort.

Analysis of the Data

Correlation Analysis

In subsequent discussion, it will be convenient to use the term *location* to refer to the *truth category* number corresponding to the position of a statement in one of the sorts. Thus to say that the ideal location of statement 48 was 3 means that on the ideal-sort the position of statement 48 corresponded to truth category 3.

The first step in the analysis of the raw data was the calculation, for each subject, of the simple correlation between the locations of the 51 statements in the self-sort and in the ideal-sort. This resulted in 104 correlation coefficients for the entire group of subjects. These ranged from -.208 to .824.

A group ideal-sort was obtained by averaging the locations of each statement over the entire group of subjects, sorting the statements on a distribution chart according to their mean locations, and taking as the group location of a statement its resulting location on the chart. The same procedure was repeated for the groups of boys and girls separately—giving boys' and girls' group ideal-sorts. The self-sort for each girl was correlated with the girls' group ideal-sort, and similarly for the boys. The resulting correlation coefficients were found to range from -264 to .720.

The correlations between the ideal-sort and the appropriate group ideal-sort were calculated for each subject. They ranged from .300 to .912.

Table I summarizes the results of the correlation analysis for the experimental group as a whole, and for its constituent groups of boys and girls.

TABLE I

SELF-IDEAL, SELF-GROUP IDEAL, AND IDEAL-GROUP IDEAL CORRELATIONS BY SEX AND TOTAL GROUP

Sorts	Group	$\bar{z}$	S.E. $\bar{z}$	t ratio	d.f.	C.V. t (1%)	$\bar{r}$	χ^2	C.V. χ^2 (1%)
Self—Ideal	Boys	.48	.033	14.7	61	2.66	.45	193.3	89.6
	Girls	.43	.048	9.0	41	2.71	.40	188.8	65.0
	Total	.46	.027	16.8	103	2.63	.43	385.1	138.5
Self—Group Ideal	Boys	.49	.027	18.4	61	2.66	.45	129.3	89.6
	Girls	.41	.437	10.9	41	2.71	.39	116.4	65.0
	Total	.46	.022	20.7	103	2.63	.43	253.4	138.5
Ideal—Group Ideal	Boys	.82	.026	31.5	61	2.66	.67	122.7	89.6
	Girls	1.00	.037	27.1	41	2.71	.76	112.3	65.0
	Total	.89	.023	38.6	103	2.63	.71	274.0	138.5

NOTE: $\bar{z}$ — the mean "z", using Fisher's method.

S.E. $\bar{z}$ — the standard error of $\bar{z}$.

d.f. — degress of freedom.

C.V. t (1%) — the tabulated critical value of "student's t" at the 1% level of significance for the number of degrees of freedom indicated.

$\bar{r}$ — the mean correlation corresponding to $\bar{z}$. All figures in this column are significant of the 1% level.

χ^2 — the value of chi square found by Tippett's formula for testing for the existence of significant individual differences.

C.V. χ^2 (1%) — the tabulated critical value of chi square at the 1% level of significance for the number of degrees of freedom indicated.

In a statistically similar study involving the changes in the self- and ideal-concepts as a result of client-centered counseling, Butler and Haigh[6] have illustrated the use of a test suggested by Tippett[7] for testing the significance of individual differences in a group of correlations when the mean correlation is significantly different from zero. The criterion for this test is

$$\chi^2 = (N - 3) \sum_n (z - \bar{z})^2$$

where n is the number of subjects, and N is the number of statements in the forced-sort. The number of degrees of freedom is $(n - 1)$. It will be seen from Table I that significant individual

[6] John M. Butler and Gerard V. Haigh, "Changes in the Relation between Self-concepts and Ideal Concepts consequent upon Client-centered Counselling," from **Psychotherapy and Personality Change,** pp. 55-75.

[7] L. H. C. Tippett, **The Methods of Statistics,** p. 180.

differences or subpopulations were found to exist both in the group as a whole and in its constituent group of boys and girls.

The subjects of the study were classified as possessing high, medium or low self-acceptance, group-acceptance or social-integration according as their self-ideal, self-group ideal, or ideal-group ideal correlations fell respectively above, within, or below one standard deviation of the corresponding mean correlation. These cross classifications were analyzed by means of contingency tables. Table II summarizes the computed and tabulated values of chi square obtained from the contingency tables using the formula[8]

$$C = \sqrt{\frac{\chi^2}{N + \chi^2}}$$

where C is the coefficient of contingency.

TABLE II

COMPUTED AND TABULATED VALUES OF CHI SQUARE FOR EXAMINING THE INTERDEPENDENCE AMONG SELF-ACCEPTANCE, GROUP-ACCEPTANCE, AND SOCIAL INTEGRATION

	Self-Acceptance	Group-Acceptance
Group-Acceptance	Computed: 253.4** Tabulated: 138.5	.....
Social Integration	Computed: 9.5* Tabulated: 9.488	Computed: 2.04 Tabulated: 9.488

*Significant at 1% level.
**Significant at 5% level.

Table II suggests that self-acceptance seems to be significantly related to both group-acceptance and social integration. This implies that the group ideal is an influential factor in the relationship between the self-concept and the ideal-concept. In order to examine the nature of this influence, it was decided to use partial correlative analysis to render constant the influence of the group ideal, and to examine the residual self-ideal relationship. By contrasting the residual relationship with the original, it was possible to obtain an indication of the group ideal's influence. The resulting group of 104 partial correlation coefficients ranged from -.277 to .751. The original simple correlations were found to range from -.208 to .824. The mean partial correlation was found to be .22 compared with the original mean simple correlation of .43.

[8]Henry E. Garret, **Statistics in Psychology and Education**, pp. 368-371.

This suggests a general lowering of the self-ideal relationship when the influence of the group ideal is held constant.

Analysis of Concern

As suggested earlier in this paper, each of the self-descriptive statements used in the present study was classified a referring to one of four posible areas of self-perception: body, bodily processes, mind or mental processes. The degree of concern which an individual feels for a given statement is related to the departure of its ideal location from the centre of the distribution chart. A subject who places a statement in the centre column of the chart feels essentially indifferent to it, in that he is not particularly anxious that it be "true" or "untrue" of the person "he would most like to be." The mathematical concern associated with a given statement, for the group as a whole, was taken as the numerical difference between its group ideal location and 5, the location of a statement placed in the centre of the distribution chart. It was felt that one might find some areas of self-perception which exhibited greater concern than others for the adolescent. The statements were grouped by subject of perception, and the mean concern found for each grouping. The same procedure was carried out individually for each of the sexes. Analysis of the differences in the mean concerns for the various areas of self-perception showed none of them to be significant, although there did appear to be a slight tendency for the girls to exhibit greater concern for mental processes than for bodily processes.

Analysis of Dissatisfaction

An individual indicates dissatisfaction with himself when his ideal-concept differs from his self-concept. It was convenient to define the mathematical dissatisfaction associated with a given statement in the forced-sort as the numerical difference between its self and ideal locations. For a group of individuals, the group dissatisfaction of a given statement was taken as the numerical difference between the average self and the ideal locations taken over the entire group. The group dissatisfaction associated with a set of statements, such as those classified under one of the areas of self-perception, was the average of the individual group dissatisfactions for the set.

The group dissatisfactions for each of the sets of statements associated with the various areas of self-perception were calculated for both the boys and girls. Since each of these group dissatisfactions was a mean, intra-sex differences could be tested for significance by means of a distribution-free test developed by van

der Waerden[9]. No significant differences were observed between the group dissatisfactions associated with the various areas of self-perception for the boys. For the girls, it was found that the group dissatisfaction in the area of mind was significantly greater than in the areas of mental processes or bodily processes.

Analysis of Sex Differences

The sex differences in the mean self-ideal, self-group ideal, and ideal-group ideal correlations were computed and tested for significance of departure from zero. None of these differences proved to be significant.

The subjects were classified by sex and by the relative magnitudes of their self-ideal and self-group ideal correlations, to see if there was a significant tendency for the self-ideal correlations of one sex to exceed the self-group ideal correlations more frequently than for the other sex. The test for independence of these classifications, by means of a 2x2 contingency table, resulted in a chi square value of 4.31 which exceeded the critical value of 3.84 for one degree of freedom at the five per cent level of significance. It followed that significantly more girls than boys had a self-ideal correlation that exceeded their self-group ideal correlation.

The percentages of boys and girls in the low and high self-acceptance, group-acceptance, and social integration groups were calculated. In the classification "high social integration" the percentage of girls (30.9) was found to be significantly greater than that of the boys (6.5). Otherwise, no significant sex differences in percentages were found.

The sex differences in the mean concerns and group dissatisfactions for each of the areas of self-perception were computed, and their significances tested by van der Waerden's test. Although none of these differences was found to be significant, the girls seemed to exhibit consistently greater dissatisfaction with self than did the boys. There also appeared to be a tendency for the girls to show greater concern for the mental area of self-perception, and for the boys to be more concerned with the physical area.

In order to obtain a measure of the similarity of the boys' and girls' group ideal-concepts, it was decided to compute the simple correlation between the boys' and girls' group ideal-sorts. This resulted in a correlation of .880 whose departure from zero is significant at the one per cent level. There appears, therefore, to be a highly significant relationship between the group ideal-concepts

[9]B. L. van der Waerden, "Ein neuer Test fur das Problem der zwei Stichproben," **Mathehatische Annalen** (1953), pp. 93-107.

of the boys and girls who constituted the subjects of this investigation.

Conclusions

It has been customary for forced-sorts to be administered individually. In the present study, an attempt was made to administer a self-ideal forced-sort to several classes of adolescent students. This was facilitated by the use of a distribution chart which permitted the continuous comparison of self-descriptive statements, and made it possible for each subject to record his own sorts and identifying data.

It is not intended that the following conclusions should apply beyond the experimental group of the present investigation. At best, they can serve as hypotheses to be tested on a wider scale.

1. Moderate but highly significant linear relationships were found to exist between the self- and ideal-concepts for the group as a whole, and for its constituent groups of boys and girls. The total group and the constituent groups were found to contain significant individual differences in the self-ideal relationship. This suggests the presence of significant subpopulations whose determinants might serve as a rewarding subject for further investigation. The methods of factor analysis would seem to be appropriate to such a study.

2. Group ideal sorts were derived for the total group and for the groups of boys and girls. Significant moderate linear relationships were found to exist between each of these group ideal sorts and the self-sorts of the corresponding groups of subjects. In all instances, strong evidence was obtained for the existence of significant individual differences or subpopulations.

3. Very significant high linear relationships were found between the ideal-concepts of the subjects constituting the total group, the boys' group, the girls' group, and the corresponding group ideals. This suggests a uniformly strong tendency for the ideal-concept of an adolescent to conform to the ideal concept of the group of which he is a member. Again, evidence of the existence of significant individual differences in the ideal-group ideal relationship was obtained.

4. The influence of the group ideal concepts of the boys' and girls' groups on their self-ideal relationships was examined by partial correlative analysis. It was observed that by holding the group ideal constant, a lowering of the self-ideal relationship resulted. It is difficult to isolate the precise area where this influence is greatest. It may reflect the group's influence on the expressed concept of self: that is, it may reflect a conscious

tendency of the individual to describe himself with a bias in the direction of what the group considers desirable. On the other hand, it may reflect the influence of the group ideal on his own ideal-concept.

5. A strong tendency was found for subjects who exhibit a high (or low) self-ideal relationship also to exhibit a high (or low) self-group ideal relationship. This suggests that adolescents who accept themselves will also be acceptable to the group of which they are a member, and conversely.

6. A significant tendency was observed for subjects with a high (or low) self-ideal relationship also to exhibit a high (or low) ideal-group ideal relationship. One might conjecture from this evidence that adolescents who accept themselves tend to direct their self development in the general direction of the "desired person" of the group of which they are members, and conversely.

7. On the other hand, no tendency was observed for subjects who have high (or low) self-group ideal relationships to exhibit high (or low) ideal-group ideal relationships. Thus no evidence was obtained to support the hypothesis that adolescents whose concepts of themselves resemble the group ideal also wish to direct their self development toward the "desired person" of the group of which they are members, and conversely.

8. For the group as a whole, no significant differences were found in the concern felt for the various areas of the perceived self. Similarly, no significant intra-sex differences in concern for these areas were observed, although there appeared to be a slight tendency for the girls to be more concerned with the area of mental processes than with that of bodily processes. The limited coverage of these areas, together with the obscuring influence of the averaging process, makes this apparent uniformity of doubtful significance.

9. Analysis of the intra-sex differences in "dissatisfaction with the areas of the perceived self" showed that the girls were significantly more dissatisfied with the area of mind than with mental processes or bodily processes. No significant differences in the dissatisfactions associated with the various areas of self-perception were found for the boys.

10. The boys' and girls' mean self-ideal, self-group ideal, and ideal-group ideal correlations were examined for significant sex differences. Although none were found, further analysis showed a significant tendency for a larger proportion of girls than of boys to have self-ideal correlations which exceeded their self-group correlations, and for a higher proportion of boys than of girls to

have self-group ideal correlations which exceeded their self-ideal correlations. This may be interpreted to mean that, in adolescence, there is a tendency for a larger proportion of girls than of boys to have self-concepts which conform more to their own ideal-concepts than with the group ideal for their sex, and for a higher proportion of boys than of girls to have self-concepts which conform more to the group ideal for their sex than with their own ideal-concepts. This may well reflect the greater social pressure which is placed on the boy to conform to a prototype than is the case with the girl. Masculine conventions in dress and behavior are more rigidly maintained than are their feminine counterparts. The stigma attached to the sissy is much more severe than that attached to the tomboy. It is difficult to find the feminine counterpart of "Huck Finn" or the "real American boy."

11. Analysis of the percentages of boys and girls in the high and low self-acceptance, group-acceptance, and social-integration groups showed no significant sex differences except in the high "social-integration" group, where a significantly higher percentage of girls than of boys were found to have a high degree of conformity between their ideal-concepts and the corresponding group ideal. This may be interpreted as meaning that, in adolescence, a higher proportion of girls than of boys are desirous of conforming to the group ideal for their sex.

12. No significant sex differences in "concern" for the various areas of self-perception were found. There did appear to be a slight tendency for the girls, more than for the boys, to be concerned with the general mental area of self-perception, and for the boys, more than for the girls, to be concerned with the physical aspects of the self.

13. The group dissatisfactions associated with the various areas of the perceived self were investigated for significant sex differences. Although none were found, there seemed to be a consistent tendency for the girls, more than for the boys, to be dissatisfied with all the areas of self-perception.

14. Little extensive analysis was applied to determine the significance of the sex differences in the group ideals of the boys and girls. The very significant high correlation found between the boys' and girls' group ideal sorts suggests that any such differences would be small.

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AN INVESTIGATION INTO THE ANNOYANCES AND FRUSTRATIONS WHICH CAUSE ALBERTA TEACHERS TO QUIT TEACHING

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Ths Problem

For at least a decade Alberta has experienced a serious teacher shortage. Hundreds of children have never had the privilege of being taught by a qualified teacher. The only opportunity for formal education in some areas has consisted of correspondence courses from the Department of Education. In spite of the many emergency methods employed by the Department of Education, the Teacher Recruitment Committee and the Alberta School Trustees' Association, the shortage persists, and it shows no sign of abatement.

In a recent study of provincial population trends[1], Professor Card of the University of Alberta offered this prediction:

> The number of teachers required per year to offset loss to the profession and to provide for increased school enrolments is in the order of 1,000 to 1,100 from 1952 to 1956, 1,200 to 1,375 from 1957 to 1961, and 1,375 to 1,500 from 1962 to 1966.

Professor Card's predictions for school population have already proved accurate. In a folder[2] prepared for high school graduates the Teacher Recruitment Committee states:

> In Alberta more than 1,000 extra teachers will be needed annually for the next ten years. Why?
>
> 1. To take care of Alberta's increasing school population (400 teachers required annually).
>
> 2. To replace persons leaving the profession (more than 700 teachers annually).
>
> Alberta's school population increased over 12,000 last year. Who will teach these 12,000 pupils?

Alberta requires 1,000 additional teachers annually. The total freshman enrolment in the Faculty of Education in 1954 was 549. Where will the extra teachers come from? One source of supply might be the more than 700 teachers who quit the profession every year. If the annoyances and frustrations of these ex-teachers were known, it would be possible to make recommendations for the improvement of conditions in the teaching profession. Any reduction in the ten per cent annual loss of teachers would go a long way toward solving the teacher shortage.

1Card, B. Y., **Population Trends in Alberta Affecting Teacher Demand and Supply,** p. 2.

2Teacher Recruitment Committee of the Department of Education, **Today's High School Graduate is Tomorrow's Teacher.**

Related Studies

Two recent Canadian studies give attention to the teacher shortage. In September, 1948, the Canadian Education Association made public a report[3] on the status of the teaching profession. The 142 page report was assembled from information gathered by questionnaires which were sent to sample populations throughout Canada. It recommended the following program of action:

1. Salaries and pensions for teachers must be increase substantially.
2. Living and working conditions for teachers must be improved.
3. Candidates for the teaching profession must have a higher standard of education, above average intelligence, good character, and a healthy interest in society.
4. Scholarships and other financial aid should be given to selected trainees.

In March, 1953, MacLean's Magazine published a report[4] entitled "The Crisis in Education." The article was the result of a four-month study of educational plants, teachers, school officials and taxpayers from British Columbia to Newfoundland. The writer states that the following things hinder teachers:

1. Overzealous parents—and those who show no interest
2. Overcrowded schools leading to unsuitable school accommodation
3. Outside interference that breaks class concentration
4. A salary scale lower than that of most professional groups

According to the article, these things help teachers:

1. Teacher participation in school policy, planning
2. Supply of modern aids like movies and records
3. Best possible instruction in teachers' colleges
4. Greater personal freedom and higher public status.

Procedure

The teachers who actually quit teaching are the only ones who know the conditions which caused them to abandon the profession. Therefore it was decided to try to learn from them the reasons why teachers leave the classroom. The plan was to contact ex-teachers by use of carefully prepared questionnaires.

The most fruitful source of information concerning ex-teachers was the office of the Teachers' Retirement Fund. With the help of

3M. E. Lazerte and others, **An S.O.S. from the Schools.**

4Sidney Katz, "The Crisis in Education," **MacLean's Magazine** (March 1, 1953), p. 7.

this office and personal contacts with former teachers, 283 questionnaires were completed. Of these, 221 fell within the limits of the study. It is worthy of note that many ex-teachers seemed reluctant to complete the questionnaire.

Limits of the Study

To make the study yield insights valid today the following limits were imposed on the sample of ex-teachers whose information constitute the data of this investigation.

1. They must have held a valid teaching certificate.
2. They must have taught in Alberta at least one year since 1945.
3. They must have quit teaching to enter another occupation or to prepare for another occupation.
4. They must not include girls who quit teaching to get married.

The Interview

To establish the reliability of the procedure, a sample of twenty ex-teachers was drawn from the 221 who answered the questionnaire. These were checked by interview on the twenty most important items of the questionnaire. A comparison of interview and questionnaire responses revealed a correspondence of over 92 per cent.

The Single Female Who Quits Teaching

School and community

Of the 31 single females who answered the questionnaire four left the teaching profession from rural schools. Eighty-seven per cent left graded schools, 77 per cent of these schools being in cities, towns, villages or hamlets. Since such a small number of the schools were rural it was surprising to find that they were so poorly equipped. The majority lacked gymnasiums, auditoriums, shops, home economics rooms, libraries, and modern teaching aids such as duplicators, film strip projectors and tape recorders. One third of them lacked indoor toilets. Thirty-two per cent of the single girls wanted better classrooms and facilities before they would consider returning to teaching.

Cultural opportunities in many of the communities were limited. The girls complained most about a lack of friends of their own age and suitable recreational facilities.

Living accommodation in many cases was primitive. Nearly two-thirds of the boarding houses lacked three-piece bathrooms and adequate insulation; 61 per cent lacked running water and 52 per cent did not have a telephone. In 61 per cent of the communities

good room and board were not available. Good living conditions are important to single girls: 27 per cent of those who would consider returning to teaching said they would want better accommodation.

Professional training

Table I shows the professional training of the single girls and makes a comparison between the number of years of training and the average number of years of teaching service.

TABLE I

A COMPARISON OF YEARS OF TEACHER TRAINING WITH LENGTH OF TEACHING SERVICE FOR THIRTY SINGLE FEMALE TEACHERS

Period of Training	Number	Percent	Average years of Service
One year	14	45	2.46
Two years	12	39	5.67
Three years	1	3	5.00
Four years	4	13	11.25
Totals	31	100	4.92

Teachers with two years of training taught, on the average, more than twice as long as teachers with one year of training; teachers with four years of training taught nearly five times as long as teachers with one year of training. Only one teacher reported three years of training. The study seems to indicate that teachers with higher qualifications tend to teach longer.

Hours of work

The 29 ex-teachers who reported their enrolments left heavy schools. The average enrolment for urban classrooms was 35 pupils, and most of the rooms had two or more grades. The heavy schools required many hours of preparation and correction of work. The average girl worked 3.85 hours overtime each day. More than half of the girls had extracurricular activities to supervise.

Many girls complained about the heavy schools. Thirty-two per cent would not return to teaching unless there were smaller enrolments or fewer grades.

The economic factor

Not many single women complained about the economic factors in teaching. Twenty-three per cent reported better pay in their

new occupations. A few girls admitted that they were getting less pay than when they were teaching. The most common complaints were that friends with less education were making more money, that higher qualifications were too expensive, and that teaching lacks opportunity for promotion.

Social conditions

Seventy-four per cent of the girls reported adverse social conditions associated with teaching. The most common complaints were:

1. Teaching places restrictions on social privileges.
2. Poor living accommodation makes social life difficult.
3. Teachers are commonly used as scapegoats.
4. Teachers lack normal opportunities to meet the opposite sex.

Parents

Seventy-four per cent of the single females had trouble with the parents of their pupils. The most common difficulties were as follows:

1. Parents blame the teacher when the pupil fails.
2. Parents believe tales brought home by pupils.
3. Parents enjoy privileges which they are not willing to allow teachers to enjoy.

Superintendents

Few girls were critical of their superintendents. The most common complaints were that they did not give the beginning teacher enough help, and that when hiring teachers they sometimes misrepresented conditions in undesirable schools.

Pedagogical difficulties

More than half of the girls complained about the lack of appropriate reference books. Other common difficulties were vague courses of study, inability to handle disciplinary problems, and the necessity of being on duty during lunch hour.

Return to teaching

Of the 31 ex-teachers 22 would return to teaching if certain conditions in the profession were changed. Following are the changes, in order of urgency, that the girls wanted:

1. Smaller enrolments and fewer grades
2. Better classrooms and facilities
3. Improved living conditions for teachers
4. Higher salaries.

Retention of teachers

The single females recommended that these things be done:

1. Pay teachers higher salaries.
2. Raise teachers qualifications.
3. Limit enrolments.
4. Improve parent-teacher relations.
5. Provide better living accommodation.
6. Improve classrooms and equipment.
7. Give the beginning teacher more help.

Why Single Males Quit Teaching

School and community

Of the 30 single males in the sample, nine quit the profession while teaching rural schools. Thirty per cent of the young men were unhappy in rural areas and small towns; nine per cent of them would return to teaching only if they could get a position in a graded school.

Even though 70 per cent of the schools were graded, the school plants and equipment left much to be desired. They were more poorly equipped than were the schools where the single females quit teaching. Many young men expressed their dissatisfaction with inadequate school buildings and lack of modern equipment. Better classrooms and equipment were required by over 18 per cent of the young men who would consider returning to the teaching profession.

Living accommodation and teacherages were even worse than the schools. Seventy-five per cent of the accommodation available to teachers lacked bathrooms, 60 per cent lacked running water and insulation, and 35 per cent had no electricity. Room and board was not available in 38 per cent of the communities. Fifteen per cent of the young men required improved living conditions before they would consider returning to the profession.

Cultural activities in the communities were not adequate for young people. There was no provision for sports of any kind in many areas. Like the young girls, the single men complained most often of a lack of friends of the same age. A lack of public libraries, too, was a source of annoyance.

Professional training

The sample of single males, like that of the single females, indicates that the more training teachers have the longer they teach. The indication, however, is not nearly as marked in the case of the young men. Those with two years of training taught 27 per cent longer than those with one year of training, and those

with B.Ed. degrees taught 51 per cent longer than the one-year trainees.

The average young man quit the teaching profession sooner than the average young woman. The single girls on the average gave 21 per cent more service than the single males.

Nine per cent of the single men who would consider returning to teaching wanted more professional training first, and 18 per cent would not return until the qualifications of teachers generally were raised.

Hours of work

Sixty-eight per cent of the schools had enrolments of from 30 to 50 pupils. The large classes kept the young men busy but they did not complain about heavy enrolments, even though they worked an average of more than three and a half overtime hours each day. In urban centres 58 per cent of the teachers were responsible for some form of community work with children. A few young men thought there should be extra pay for this work.

The economic factor

Approximately three out of four of the single men were dissatisfied with the economic aspect of the teaching profession. Table II shows the factors which caused most dissatisfaction.

TABLE II

THE ECONOMIC FACTOR AS A SOURCE OF DISSATISFACTION TO THIRTY SINGLE MALE EX-TEACHERS

Source of Dissatisfaction	Number	Percent
1. The salary for teaching was less than that of my present occupation	16	53
2. Friends with less education and no training made more money	14	46
3. Anticipated salaries were lower for teaching than for my present occupation	13	43
4. Teaching lacks opportunity for promotion	9	30
5. It costs too much to get the qualification to earn higher salaries	9	30
6. Lately, hours and conditions in other occupations have improved, while teaching has become more difficult	9	30

Social conditions

Forty-three per cent of the single men reported more social freedom in occupations other than teaching. Thirty-seven per cent of them thought that the low entrance requirements for the profession lowered the teachers' prestige and that the poor living accommodation provided for teachers hindered them socially. One teacher in five complained about being responsible for community activities; one young man out of ten thought that teaching was spoiling his personality.

Parents

Eighty per cent of the young men had difficulty with some of the parents. Most common complaints in order of frequency were:

1. Parents do not insist that their children attend school regularly.
2. Parents do not consult teachers about children.
3. Parents show no interest whatever in school.
4. Parents blame the teacher when the pupil fails.
5. Parents enjoy privileges that they are not willing to allow teachers to enjoy.

Superintendents

Most of the young men had no fault to find with the superintendents. A few though that superintendents did not give the beginning teachers enough help, and that they sometimes made promises which they could not fulfil.

Pedagogical difficulties

The most common pedagogical difficulties of young men were much the same as those of the young women. The list of difficulties follows in order of the frequency with which each one was reported:

1. There was a shortage of adequate reference books.
2. The courses of study were indefinite.
3. The young men disliked having to be on duty during lunch hour.
4. Many were unable to handle disciplinary problems.

Return to teaching

Five ex-teachers would not return to teaching under any circumstances. Twenty-two of them would return under certain conditions, the most important of which are stated below:

1. Salaries would have to be higher.
2. Qualifications of teachers generally would have to be raised.

3. The prestige of the teaching profession would have to be better.

Better classrooms and facilities and improved living conditions for teachers were on the list, but they were of minor importance when compared with the two major requests—money and prestige.

Retention of teachers

Twenty-seven of the young men made the following recommendations:

1. Raise teachers' salaries.
2. Increase the requirements for teacher certification.
3. Improve the prestige of the profession.
4. Raise the entrance requirements.

Most of the items are concerned with salary or prestige. These two seem to be by far the most important considerations for single males.

Married Females Who Quit Teaching

This study indicates that the majority of teachers in rural schools are married women. Twenty-one of the 66 women left rural schools. Most of the sample of married females left schools housed in uncomfortable buildings with inadequate facilities. The dearth of comfort and equipment may have had some effect in driving the mothers back to their household duties. Thirteen per cent of the married women wanted better classrooms and facilities before they would return to teaching.

Living accommodation for many of the married women presented no problem because they had their homes in the community. For others, however, living accommodation was an acute problem. In many districts accommodation was entirely lacking or quite inadequate. Seventy-three per cent of the places which the ex-teachers left did not have modern bathrooms; more than half lacked electricity. Of the married women who would return to teaching, 16 per cent wanted large, comfortable teacherages.

Professional training

Only three of the married women had university degrees. Seventy-three per cent of them had one year of training and 21 per cent had two years. The teachers with two years of training taught an average of nearly five years longer than teachers with one year. Two teachers with more than two years of training did not teach as long as those with two years of training, but the inadequate size of this sample makes a conclusion insecure.

Hours of work

Three-quarters of the married women had dependents at home,

but in spite of this they spent an average of 3.53 hours overtime each day on school work. Table III shows the range of overtime per day.

TABLE III

AVEERAGE HOURS OF OVERTIME PER DAY WORKED BY SIXTY-SIX MARRIED FEMALE TEACHERS

Overtime Hours	Number of Teachers	Percentage
1—2	7	10.61
2—3	21	31.82
3—4	11	16.67
4—5	16	24.24
5—6	4	6.06
6 and over	7	10.61
Totals	66	100.01

It would appear that most of the married women did not shirk their teaching duties because of family obligations. Several of the married women said that they had quit teaching because they found it impossible to do justice to two jobs at the same time. Nearly 73 per cent of the married women who quit teaching returned to household duties.

Some of the women complained about heavy enrolments. About nine per cent wanted smaller enrolments and fewer grades before they would consider teaching again.

The economic factor

On the whole, the married women seemed quite satisfied with salaries and economic conditions in the teaching profession. Only one-third of the sample reported dissatisfaction of any kind. The most common complaint was that higher qualifications in teaching cost too much. It is likely that with one breadwinner in the family, the economic factor is not too important to most of the married women.

Social conditions

Married women were not as concerned about adverse social conditions in teaching as were the single females and males. Their most common trouble seemed to be a difficulty in having a successful social life with the type of living accommodation provided for

teachers. The married women also felt that their social life was restricted because they were teachers.

Parents

Having children of their own did not seem to make it any easier for married women teachers to get along with parents in the community. Eighty per cent of the ex-teachers complained about the behavior of some of the parents. The most common complaints were:

1. Parents blame the teacher when the pupils fail.
2. Parents believe tales children bring home from school.
3. Many parents send their children to school before they are mature enough to learn to read.

Superintendents

The majority of the ex-teachers in this sample had no fault to find with superintendents. The most serious criticism of the minority was that superintendents do not give beginning teachers enough help. Some ex-teachers thought that superintendents were inclined to make promises which they could not fulfill.

Health

Six married women claimed that teaching was responsible for their present poor health. Three others said they had to quit teaching because of poor health. Eleven per cent of the sample said that it was difficult for teachers to maintain good mental health and 21 per cent claimed that the noisy environment made them excessively tired at the end of a teaching day. Nearly one-third of the teachers complained because there was not a minute to relax during the whole day. Several women found teaching hard on the nerves.

Pedagogical Difficulties

The majority of married women had pedagogical difficulties. Their most common troubles were the same as those experienced by single males and females, namely:

1. A shortage of appropriate reference books
2. Having to be on duty during lunch hour
3. Vagueness of the courses of study

Return to teaching

Seventy-five per cent of the married women would teach again if certain conditions were different. Only nine per cent of them would require higher salaries. The conditions necessary to bring most of the married women back to teaching follow:

1. The family would have to be of school age.
2. Living conditions for teachers would have to be better.
3. Personal teaching qualifications would have to be improved.
4. Classrooms and equipment would have to be better.

Retention of teachers

The married women thought the following things should be done to keep good teachers in the classrooms:

1. Pay teachers higher salaries.
2. Raise the requirements for teaching certificates.
3. Provide better living accommodation for teachers.
4. Improve classrooms and equipment.
5. Improve the prestige of the profession.

It is interesting to note that while most of the married women did not want higher salaries for themselves, they thought that better salaries were of prime importance in keeping good teachers in the classrooms.

Married Males Who Quit Teaching

School and community

There were 94 men in the sample of married male ex-teachers. Only 11 of them left rural schools. Since the great majority left city, town or village schools, it was surprising to find that, on the whole, they were inadequate and poorly equipped. Though the lack of equipment may have annoyed the men, it did not cause them to quit teaching. Only 3.57 per cent of the men said they wanted better classrooms and facilities before they would return to teaching.

There was considerable grumbling about poor living accommodation provided for teachers, and there probably would have been more except for the fact that 17 of the men owned their homes. What the men wanted most was a well insulated house with electricity, running water, and a three-piece bathroom. Many of them wanted a garage. Lack of living accommodation was troublesome but it was not a major reason for men quitting the profession. One teacher probably summed up the way most of the men felt when he said: "If the salaries were adequate we would soon supply our own living accommodation."

Hours of work

Most of the married males quit teaching in difficult schools. The average enrolment was 31.06 pupils and 39 per cent of the men had enrolments between 35 and 45. That the men had to work hard is indicated by the fact that some of them put in between seven and eight overtime hours each day. The average overtime for married

males was 3.61 hours per day. Some men worked as much as 65 hours a week at teaching. Seventy per cent of the men had extra-curricular activities to supervise. Although the men complained about the long hours and heavy enrolments, only nine per cent of them considered that they were factors which caused them to quit teaching.

Professional training

The married men in the sample represented a very great loss to the teaching profession. More than 72 per cent of them had two or more years of teacher training. More than 41 per cent had one or two university degrees. If the sample is representative of the men leaving the profession, the loss of male teachers is indeed serious.

Married men with two years of training taught, on the average, 48 per cent longer than those with one year of training. There were only seven teachers with three years of training, but they taught on the average more than twice as long as the teachers with one year of training. It was surprising to note that teachers with degrees did not stay in the profession as long on the average as teachers without degrees. The reason for this anomaly was that 83 per cent of the ex-teachers with degrees were either making more money at their present occupations or expected to make more. It is apparent that there are better salaries for teachers with degrees outside the teaching profession.

The economic factor

Eighty-six per cent of the married male ex-teachers were dissatisfied with the economic factors in the teaching profession. Forty-eight per cent were receiving better pay in their new occupations and 44 per cent expected to receive more salary. Forty-three per cent said that teaching lacks opportunities for promotion.

The economic factor was far more important than any other in causing men to choose another occupation. More than 50 per cent of the married men in the sample required some adjustment of the salary scale for teachers before they would consider returning to the profession.

Social life

Approximately 77 per cent of the married men were dissatisfied with the social life of teachers. Poor living quarters made it difficult for many to have a successful social life. Many others resented the fact that the public expected them to be on their best behavior at all times. About 25 per cent complained about the low prestige of the

profession. Nearly 30 per cent of the ex-teachers felt that changing their occupation had improved their social life.

Parents

Married males had less difficulty with parents than had the females or single males. However, they made nearly the same complaints about parents, and some of the male ex-teachers made some pointed remarks about a lack of discipline in the homes.

Three of the ex-teachers would want better parent-teacher relations before they could be induced to return to the profession. Six men thought it would help to keep good teachers in the schools if parents would co-operate with the teachers.

Superintendents

Twenty-one per cent of the married males thought that superintendents tried to keep teachers' salaries down so that school boards could stay within their budgets. However, there were nearly as many favorable remarks about superintendents as there were critical remarks. Only four of the ex-teachers thought that the quality of the superintendents should be improved.

Health

Nine of the married men had to quit teaching because of poor health, and seven of these claimed that teaching was responsible for their poor health. Forty-one per cent felt that there wasn't a minute to relax during the entire teaching day, 20 per cent found the noisy environment excessively tiring, and a few found teaching a nerve-racking occupation.

Pedagogical difficulties

The married males agreed with the other ex-teachers that the two most common pedagogical difficulties were:

1. Vague courses of study
2. A lack of suitable reference books

Twenty-two per cent of the married men complained that they did not get their choice of subjects or grades to teach.

Return to teaching

Eighty-four of the men out of a total of 94 would return to teaching under certain conditions. They asked for these things:

1. Improvement in salaries
2. Increased prestige of teaching
3. Curriculum changes
4. More control over discipline
5. Less over-loading of teachers with high enrolments, too many grades and too many subjects

Retention of teachers

The married men were asked what they thought should be done to keep good teachers in the classrooms. Table IV is a summary of the most common recommendations.

TABLE IV

WHAT EIGHTY-SEVEN MARRIED MALE EX-TEACHERS THINK SHOULD BE DONE TO KEEP SCHOOLS SUPPLIED WITH GOOD TEACHERS

Recommendations	No. of Teachers	Per Cent of Teachers
1. Improve teachers' salaries	58	66.67
2. Lengthen the training period and raise the standard for teacher certification	23	26.44
3. Launch a definite program to make teaching a profession with the prestige of other professions	17	19.54
4. Take definite steps to make the public realize the importance of their teachers	13	14.94
5. Raise the entrance requirements for the Faculty of Education	9	10.34

Conclusions

The conclusions below are based on the questionnaires received from 221 ex-teachers of the Province of Alberta. The respondents seemed to be genuinely interested in doing what they could to help to discover why teachers quit teaching. Many wrote long letters to supplement the information on the questionnaire, and nearly every questionnaire had illuminating comments written upon it. Several of the ex-teachers expressed the wish that the resulting study would be used to help correct existing conditions in the teaching profession. No questionnaire was answered facetiously; most of the replies were gratifyingly frank and earnest.

From the majority of the complaints made by the total sample of ex-teachers the following aspects of teaching were found to be most annoying and frustrating:

1. Many schools were unattractive and poorly equipped.
2. Living accommodations were primitive in many of the school districts.
3. Most of the ex-teachers had been overloaded with extra-curricular activities, and with either heavy enrolments or too many grades and subjects.

4. Friends with less education and no special training were making higher salaries than the teachers.
5. Most of the ex-teachers worked much longer than the popular forty-hour week. Many worked up to 65 hours per week when they were in the teaching profession.
6. Teachers were generally expected to be on their best behavior at all times.
7. Parents were often uncooperative. Many condoned the behavior of their children whether or not the teacher approved.
8. Superintendents were often too busy to give the beginning teacher enough help. When hiring teachers, some superintendents tend to misrepresent conditions in undesirable schools.
9. Teaching was an exacting occupation for many teachers. A few reported it as a nerve-racking ordeal.
10. The courses of study were not definite enough. There was a very general complaint about the lack of reference books.

While each item in the above list of disadvantages may have had a cumulative effect which drove many teachers out of the profession, the information on the questionnaires indicated that

1. The majority of the males in the sample quit teaching because
   (*a*) The salaries in teaching were too low.
   (*b*) The prestige of the male teacher was not adequate.
2. The single females quit teaching because
   (*a*) Most schools had heavy enrolments, too many grades and too many subjects.
   (*b*) Schools were uncomfortable and unattractive. They lacked modern equipment.
   (*c*) The living accommodation available to teachers in many school districts was primitive.
3. The married women quit teaching because
   (*a*) Their families at home required their full time.
   (*b*) There were no adequate teacherages to be had at a reasonable rent.
   (*c*) They could not improve their qualifications without leaving their families to attend summer school.

Recommendations

All of the ex-teachers were asked to state what they thought should be done to keep the classrooms staffed with good teachers.

A majority of males and females alike made these recommendations:

1. The salaries of teachers must be raised.
2. The minimum qualifications for teachers must be improved.

The teachers were not unanimous concerning how their economic condition might be improved. Some recommended the use of a bonus for married male teachers, increasing with each dependent. Others recommended broader salary schedules, permitting the prospect of continued increments for a longer portion of their working lives. They approved recognition of years of training and experience in salary schedules. Some urged special increments to teachers completing twenty years of service. Finally they recommended a wider range of salaries for administrators in order to provide incentives for young teachers to remain in the profession.

The improvement of teacher qualification led to a variety of recommendations. Most popular was a minimum of two years of teacher training before certification. Several ex-teachers recommended four years of training in advance of certification. There was wide rejection of short-term and emergency teacher training programs, not only because of lowered quality of educational service, but also because of the adverse effect on the prestige and morale of the teaching profession.

PHYSICAL EDUCATION IN ALBERTA HIGH SCHOOLS

KENNETH GRIERSON
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The Study

Authorities in the field of physical education stress its importance in the school program. Many, indeed, argue that physical education is the most important part of the program because of its efficacy in character and social development, as well as physical development.

However this may be, teachers from various parts of the province have expressed doubts that the potential values of physical education are being realized because of weaknesses in the program and the lack of appropriate facilities. The present study was designed to investigate these doubts. Specifically, the writer set out to determine:

1. The extent to which physical education programs, facilities, and related factors in Alberta high schools conform to standards recommended by recognized authorities.
2. The standards which are necessary to carry out an adequate program of physical education with particular reference to all-round participation throughout the year.

Related Studies

Research related to the present study is meagre enough. The writer found only five studies which were applicable. Guerrara's New York study[1] dealt mostly with gymnasium size and activity areas. In 1943 Arthur Eriksson[2] surveyed the teaching of physical education and health in representative one-room rural schools in Alberta, recommending increased professional training, more extensive use of the school day for physical education, and the use of school property for community recreation purposes. Panton's Western Canada study[3] showed a serious lack of gymnasium facilities in at least 90 per cent of all schools. Hughes' survey[4] of Victoria schools indicated that the program was not too well organized, with many facilities found to be inadequate.

1J. A. Guerrara, "A Survey of Physical Education Facilities," **Scholastic Coach** (January, 1953).

2Arthur W. Eriksson, **A Survey of Physical Education and Health in Representative One-Room Schools of Alberta.**

3James Hayes Panton, **A Survey of Men's Intramural Programs in Universities and Secondary Schools in Manitoba, Saskatchewan, Alberta and British Columbia.**

4Richard L. Hughes, **A Survey of the Physical Education Programs in the Secondary Schools of Greater Victoria, British Columbia Area.**

McLachlin,[5] in his survey of Alberta city schools, obtained data which revealed that the program was below accepted standards. Particular deficiencies included lack of yearly outlines, lack of outdoor facilities, and a weak recreational program for the faculty. The development of a Canadian physical education score card was recommended.

The Questionnaire

Since the many aspects of physical education were too numerous for a single survey, topics were selected as listed below.

The questionnaire was developed as a tool for gaining information about these topics. It was organized in the form of a score card—based, where possible, on LaPorte's Score Card No. 2,[6] and revised to make it applicable to the Alberta situation. The questionnaire was sent to one hundred representative high schools throughout the province. A total of seventy-four questionnaires were completed and returned.

Following are the topics covered by the survey:

1. Program of studies
2. Equipment and supplies
3. Outdoor areas and facilities
4. Indoor areas and facilities
5. Intramural and interscholastic programs.
6. Utilization of community resources
7. Certification and training of teachers

Topic 6, utilization of community resources, was optional. Its inclusion was only to gain information about assistance frm agencies outside the school, and no score value was attached to it.

On the basis of a check list for all the other items, scores were computed for individual schools. School scores could thus be compared one with another, and also with a minimum standard score.

Findings

General scores

Table I gives the general scores for different kinds of school area. The offerings of large town and city schools appear to be superior to the offerings of others.

Equipment

Table II indicates the equipment being put to use in the schools of the province. The items listed were selected from several approved lists. Obviously many schools in Alberta lack suitable equipment and supplies.

[5]Herbert J. M. McLachlin, **A Survey of Physical Education Curriculums, Facilities and Administrative Organizations in the Senior High Schools in the Cities of Alberta.**

[6]W. R. LaPorte, **The Physical Education Curriculum,** pp. 71-85.

TABLE I

AVERAGE SCORES IN DIFFERENT SCHOOL AREAS

Kind of School	Program	Equipment	Outdoor Facilities	Indoor Facilities	Intramural and Interscholastic Activities	Certification	Total
Edmonton and Calgary schools	81	38	13	29	52	7	220
City or town school of 5 or more rooms	91	47	15	28	55	17	253
Private schools	64	29	11	24	34	11	173
Town schools of 4 or fewer rooms	71	27	13	16	40	9	176
Rural and village schools	69	21	15	8	34	5	152

TABLE II

NUMBER OF SCHOOLS WITH SPECIFIC EQUIPMENT AND SUPPLIES

Equipment and Supplies	Number of Schools
Basketballs	39
Footballs	31
Soccer balls	21
Volleyballs	39
Jumping standards	41
Tennis nets	10
Tumbling mats	29
Badminton nets	28
Badminton rackets and presses	16
Tennis rackets and presses	5
Catcher's mask and chest protector	35
Goal pads	35
Stop-watch	20
Measuring tape	31
Record player	59
Records for rhythms	21
Softballs	58
Softball bats	50
Springboard	27
Parallel bars	13
Box horse	30
High bar	6
Rings	6
Climbing rope	4
Baseballs	41
Baseball bat	45
Discus and Shot put	26

Facilities and services

Table III shows the extent to which Alberta schools supply nineteen basic facilities and services. Playgrounds require separate mention. Only five of the 74 schools could boast of a turf playground surface in excellent condition.

TABLE III

NUMBER OF SCHOOLS WITH SPECIFIC FACILITIES AND SERVICES

Facilities and Services	Number of Schools
Boy's and girl's gymnasium	5
Physical instructor's office	3
Apparatus room	10
Storage room for equipment	22
Locker and basket per pupil	7
Shower facilities	18
Footbath	1
Pupils' clothing storage facilities	9
Towels	3
Fixtures for volleyball net	40
Fixtures for badminton net	24
Basketball backboards	38
Rest room with cot	21
Proper sanitary facilities	41
Health Service room	8
Bleacher accommodation	10
Recessed non-glare lighting	15
Supply room	8
Room for corrective physical education	3

Inerscholastic activities

These were found to be carried on rather extensively. Seventy of the schools participated, some in as many as six different activities. Most schools had to travel many miles in order to compete in inter-school athletics.

Basic program and organization

Only twelve of the 74 schools from which returns were received offered both Physical Education I and Physical Education II. Although many schools have the facilities for both these programs, less than 20 per cent are availing themselves of Physical Education II.

Only three schools averaged as much as five standard periods per week in physical education. Yet authorities consider five periods as a minimum.

None of the schools devoted more than half of the periods to the actual teaching of basic physical education skills. Most schools

seemed to consider participation the chief aim. Rarely was a planned outline used in the teaching and practice of basic skills.

Only fourteen schools divided pupils into classes on the basis of some classification system. While it is recognized that small schools cannot easily divide their few pupils, the larger schools could well do so in terms of some approved organization.

Fifteen schools had developed co-educational programs of six weeks or more, nine of four or five weeks, six of three weeks, seven of two weeks. The remainder had done little or nothing in this regard. The chief co-educational activities were dancing and general recreation, with obviously little attempt at adapting team sports for joint participation by boys and girls.

Qualification of teachers

Thirty-three schools indicated that no staff member had improved his qualifications for teaching physical education from 1945 to 1953. In 41 schools, however, one or more staff members had been interested enough to improve their qualifications during the same period.

Some Standards in Physical Education

While there is no absolute agreement among authorities as to standards, the following are generally agreed upon.

Equipment and Supplies

LaPorte[7] states that from four to eight basketballs should be available for a class of 40 pupils. Similarly an adequate number of footballs, soccer balls, softballs, volleyballs, hockey sticks, etc., should be supplied for the efficient operation of team games. Equipment should also be had for some of the following: archery, badminton, golf, handball, horseshoes, paddle tennis, table tennis, tennis, shuffleboard, darts, various table and card games.

Facilities and services

LaPorte is again the authority for stating that athletic fields should be provided with areas suitable for all forms of field games and various kinds of court games. For instructional purposes as much space is required for a school of 50 students as for one of 500 students. Each school should have a battery of from eight to ten court units for each of the individual or dual activities to ensure satisfactory class instruction. A battery of this size would accommodate as many as 40 students. Modification in teaching techniques and class arrangement into larger groups reduces the need for facilities, but the effectiveness of the instruction is thereby reduced.

[7]LaPorte, **op. cit.**

A fair estimate of minimum ground area in the senior high school is from ten to fifteen acres. Heavy turf is the ideal surface for large areas.

The College Physical Education Association[8] reports that areas and equipment for baseball, football, golf, lacrosse, soccer, tennis, track and field activities should be made available in addition to other field areas for class instruction and intramural sports.

Blair's[9] extensive study of facilities includes standards or criteria generally approved by leaders in physical education. For gymnasia, his general rule is that the dimensions should be 50 by 80 feet if fewer than 500 students are enrolled. Table IV gives the minimum recommended gymnasium dimensions for schools of various size. Separate gymnasiums for girls and boys should be provided where possible; where not, the main floor area should be divisible into two units.

TABLE IV

RECOMMENDED GYMNASIUM SIZE

Enrolled	Width	Length	Height
0-150	46′	80′	18′
151-500	50′	85′	20′
501-900	60′	90′	22′
901-over	70′	100′	22′

Other recommendations made by experts include the provision of a swimming pool, together with adequate shower, locker, storage and dressing areas to handle peak loads of classes.

General program

In addition to the basic program, there should be a carefully administered but not too extensive program of intramural and inter-school athletics, with all students participating in the activities.

Conclusions

Real progress in physical education in Alberta has been made during recent years. More gymnasiums have been built, more information is being made available to teachers, more teachers are striving to improve their qualifications, and school boards are becoming more aware of the importance and need of physical education.

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[8]The College Physical Education Association, **College Facilities for Physical Education, Health Education and Recreation,** pp. 2-96.

[9]Herbert Blair, **Physical Education Facilities for the Modern Junior and Senior High Schools,** pp. 12-53.

Comparison of Alberta standards with those just indicated, however, suggests that the Alberta situation is still very unsatisfactory.

Equipment and facilities

An indication of the inadequacy here is that only five of the 74 schools had gymnasium floor areas approaching minimum standards. A further indication is that 33 schools had no tumbling or apparatus work. Such limitations are especially serious in Alberta, where the winter weather is severe and pupils are often restricted to indoor classes. School boards must assume responsibility for this situation.

Participation

The fact that the schools surveyed had less than 40 per cent of the pupils participating in regular physical education classes indicates a serious lack of facilities or of awareness of the need for physical education. The fact that so few schools offer Physical Education II may mean that many teachers do not feel qualified to teach this subject.

Program and organization

Eighty-one per cent of the schools had physical education periods of 40 minutes or less. Very few schools used the double period. Longer periods are required to permit showering and dressing following the activity. Recommended health rules are often overlooked in the rush of getting to the next class.

Only three schools adhered to the suggested five periods per week in physical education. This requirement could be met regardless of facilities if school administrators were aware of it and planned the program accordingly.

Authorities in physical education hold the view that most of the period should be devoted to teaching and practising the fundamentals. Obviously most teachers have not accepted this view. They appear to feel that what matters most is "playing the game."

More than half the schools devoted two weeks or less to individual or dual activities. In an approved program these activities take up one-fourth of the entire course. It would appear that teachers are unaware of the important role of carry-over activities in the program.

Perhaps the greatest deviation from recommended standards was in program planning. Testing and measuring scales for different activities were not made available to teachers. Reference material was scanty. A flexible monthly, weekly, and daily schedule was

seldom employed. Most teachers were not aware of the time allocation for each of the activities. Further, the sequence for teaching various fundamentals was unknown to most of them.

Intramural and interscholastic programs, on the other hand, were active and well conducted in many schools. Desirable forms of social living were encouraged. Still more could be done in this valuable part of the program, with more of the staff encouraged to participate.

Recommendations

1. Supplementary literature should be made available to all school administrators, giving information about program planning, setting down an approved program, and suggesting alternate and sample programs flexible enough for use in various school situations.

2. Periodic meetings should be called by administrators to ensure a complete and coordinated program.

3. Administrators should inform school boards of recommended standards for facilities in physical education.

4. A higher standard should be required of teachers. If additional training at the university level is not feasible, in-service training should be carefully planned and instituted.

5. Supervisors trained and experienced in physical education should be available to assist administrators in improving the program, and to conduct demonstration classes for in-service training.

6. Continued surveys in physical education should be carried out to assess needs and progress. It is suggested that the writer's score card be improved and again used in a future survey, and that a standard score card be developed for Canadian schools.

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POST-SCHOOL OCCUPATIONS OF ALBERTA 1949 HIGH SCHOOL GRADUATES WITH UNIVERSITY ENTRANCE STANDARDS

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Problem and Purpose of the Study

What becomes of those students who graduate from our high schools with sufficient requirements to attend the University of Alberta? How many are kept from further study by financial limitations? What portion of our graduates leave the province to study at other universities and colleges in Canada and the United States? How successful are the products of our high schools in their first year at university?

These and similar questions have long been of concern to Alberta educators. To aid in answering them, the authors decided to investigate the various paths taken by our high school graduates after graduation, and the factors influencing their decisions. More specifically they undertook to provide, for a given year, information about the following:

1. The proportion of high-school graduates entering the University of Alberta, and to:
   (*a*) Record the faculties entered and any change of faculty during, or immediately following, the freshman year,
   (*b*) Determine the number of casualties at the University of Alberta during the first year of study,
   (*c*) Compare the scholastic standings obtained in the Department of Education grade XII examinations with the final first year results obtained while in attendance at the University of Alberta.
2. The proportion of high school graduates not entering the University of Alberta immediately, and to ascertain:
   (*a*) The number attending other accredited universities and their reasons for attending universities outside of Alberta,
   (*b*) The number not attending any accredited university and their reasons for non-attendance,

(*c*) The number of persons receiving specialized training not associated with an accredited university,

(*d*) The occupational status of those not attending a university,

(*e*) The standings obtained in the Department of Education grade XII examinations.

Sample and Procedure

The population selected for this study was made up of students who graduated from Alberta high schools during the school year ending 1949, and who obtained a High School Diploma with at least "B" standing in seven grade XII subjects required for entrance into the University of Alberta. No limit was imposed in terms of the restrictive minimum average required by some faculties, nor of the length of time necessary to complete the grade XII course. Thus each of the students was a possible candidate for entrance to some faculty of the University for the winter session of 1949. Using the above criteria, 821 students were selected as the total population. These students were separated into two groups—the University of Alberta group and the Questionnaire group.

The University of Alberta group consisted of those students from the total population who enrolled in the winter session at the University of Alberta, at Mount Royal College (restricted to courses recognized by the University of Alberta), and in the Faculty of Education one-year course at the University of Alberta. A total of 422 students fell into this category.

For the remaining 399 of the total population no evidence could be found of registration in the University of Alberta or its affiliates. This group formed the tentative Questionnaire population.

A copy of the questionnaire, with a business reply envelope, was sent to the address of the student as recorded in the Department of Education files. The return was slighly above 50 per cent: usable replies were received from 201 individuals. These respondents constituted the final Questionnaire group. All of the data on this group was obtained from the questionnaires.

Findings — University of Alberta Group

Enrolments

An examination of the first year registration at the University of Alberta and its affiliates for the 1949-50 session showed a total of 1,137 freshman students enrolled in full or part-time programs. As indicated above 422 of these were matriculation graduates from Alberta high schools in 1949.

The faculties selected by the members of the University of Alberta group, together with the total first year enrolment in each of the faculties, are shown in Table I.

TABLE I

REGISTRATION OF FRESHMAN STUDENTS IN 1949-50 FACULTY PROGRAMS SHOWING PERCENTAGE OF 1949 MATRICULATION STUDENTS IN EACH AND PROGRAM SELECTION OF 422 MATRICULANTS

Faculty Program	First Year Total Enrolment	Number of 1949 Matriculants	Per Cent of 1949 Students	Per Cent of 422 Matriculants, 1949
1. Junior Elementary and Intermediate	427	82	17.9	19.4
2. B.Sc.—Engineering	144	76	52.8	18.1
3. B.Sc.—Arts	98	60	61.3	14.2
4. B.Sc.—Medicine	60	42	70.0	10.0
5. B. Education	106	35	33.0	8.3
6. B. Arts	63	34	54.0	8.7
7. B.A.—Law	35	26	72.2	6.1
8. B.Sc.—Nursing	35	21	60.0	5.0
9. B.Sc.—Dentistry	21	13	61.8	3.1
10. B.Sc.—Household Economics	24	13	54.1	3.1
11. B. Commerce and B.A., B. Commerce	37	10	27.0	2.3
12. B.Sc.—Agriculture	32	7	21.9	1.6
13. B.Sc.—Pharmacy	25	3	12.0	0.7
Total	1,137	422		

It is interesting to note that only 37.1 per cent of the 1,137 first year registrants at the University of Alberta for the 1949 - 50 session were persons who had graduated from the Alberta high schools in 1949. In only two faculties did the 1949 matriculation graduate constitute more than 70 per cent of the enrolment. The three students who entered the School of Pharmacy were able to enrol directly from high school, presumably because they had completed the required internship while finishing their matricula-

tion (all three had taken five or more years to complete high school). The low percentage of matriculants enrolled in the Junior Elementary and Intermediate Certificate program, the Bachelor of Education program, and the B.Sc. in Agriculture program may be attributed to less rigid entrance requirements which increased the proportion of non-matriculation students in these programs.

High school averages

The average mark made by a student on the seven grade XII subjects required for senior matriculation is probably roughly representative of his academic ability. However, one must consider that in arriving at this average only the highest mark in each subject was recorded. No account was taken of the fact that one-third of the 422 students repeated one or more of their grade XII subjects.

Table II indicates the grade XII averages of matriculants in the 13 faculty programs. Although the majority of the averages in each faculty came near the mean of 69.1 per cent, students enrolled in medicine, dentistry and pharmacy fell noticeably below the average for the total population. (See also Table III.) In terms of high school averages, it is evident that the degree course in the Faculty of Education attracted students of higher academic ability than did the Junior Elementary and Intermediate program.

Progress in University

Of the total University of Alberta group of matriculants starting the 1949 - 50 session, only 408 completed the full term. Seven members of the group withdrew before completing the year, four members had permission to defer their final examinations, and the remaining three students were engaged in only a partial course. Of the 408 students completing their first year 279 (68.4 per cent)[1] passed all of their courses, 92 (22.5 per cent) failed one or more subjects but were granted permission to write supplemental examinations, 17 (4.2 per cent) were recommended to Category II, and 20 (4.9 per cent) were recommended to Category IV.[2]

Table III presents a comparison of the University record of 412 matriculants in the various faculty programs with the record of all first year students in the same programs at the University of Alberta during the 1949 - 50 session.

1Including nine students who were recommended to transfer from the faculties of Law, Medicine and Dentistry even though they failed no subjects.

2In Category II the student is recommended to withdraw. If he decides to return, he is permitted no summer session registration and no supplementals; is not promoted, and is placed on "probation". "40" courses taken as first year courses remain first year courses.

In Category IV the student is required to withdraw from the University. If he is later allowed to return, he is on probation and is required to repeat the year, including those courses in which Departments reported passes.

TABLE II

GRADE XII AVERAGES OF 422 MATRICULANTS IN THIRTEEN FACULTY PROGRAMS

Faculty Program Entered 1949-50 Session	Number of 1949 Matriculants	Average of Grade XII Marks
B.Sc.—Nursing	21	71.3
B.Sc.—Engineering	76	71.1
B.A., LL.B. and Pre-LL.B.	26	70.9
B.Sc.—Agriculture	7	70.9
B.Sc.—Household Economics	13	70.7
B.Sc.—Arts	60	70.6
B. Education	35	69.1
B. Arts	34	68.8
B.Sc., M.D. and Pre-M.D.	42	67.1
B.Sc., D.D.S. and Pre-D.D.S.	13	66.8
Junior Elementary and Intermediate	82	65.6
B. Commerce and B.A., B.Com.	10	65.1
B.Sc.—Pharmacy	3	60.6
AVERAGE TOTAL OF POPULATION		69.1

Of the 422 matriculants attending the University of Alberta, 50 per cent completed grades X, XI, and XII in three years. Approximately 45 per cent completed high school in four years and the remaining five per cent required five or more years to graduate from high school with matriculation. Whether or not the length of time required to complete high school operated as a factor in university success is indicated in Table IV.

The obvious conclusion is that students who complete high school in minimum time show academic ability superior to those requiring five or more years to complete matriculation. The difference between the three and four year groups is less marked.

TABLE III

COMPARISON OF UNIVERSITY RECORDS OF 412 MATRICULANTS IN VARIOUS FACULTY PROGRAMS WITH TOTAL FIRST YEAR STUDENTS ENTERED IN SAME PROGRAMS

Faculty Programs Entered 1949-50	Per Cent Passing all Courses		Per Cent Recommended to Category II		Per Cent Recommended to Category IV		Per Cent Failing to Receive credit for Complete Year on Final Examination*	
	Total 1st Yr. Group	1949 Mat's	Total 1st Yr. Group	1949 Mat's	Total 1st Yr. Group	1949 Mat's	Total 1st Yr. Group	1949 Mat's
Jr. E. and I.	71.8	86.6	1.3	0.0	1.8	0.0	25.1	13.4
B.Sc.—Engineering	40.0	42.1	9.2	13.2	15.1	9.2	35.7	45.5
B.Sc.—Arts	52.8	58.3	7.3	3.3	13.0	5.0	26.9	43.4
B.Sc., M.D. and Pre-M.D.	56.3	50.0	9.4	4.8	3.1	0.0	31.2	45.2
B. Education	53.0	74.3	2.4	2.8	7.2	5.7	37.4	17.2
B.A.—Arts	59.0	67.2	5.6	0.0	6.8	5.8	27.7	27.0
B.A., LL.B. and Pre-LL.B.	66.0	76.9	2.8	3.8	8.3	3.8	22.9	15.5
B.Sc.—Nursing	80.0	85.7	3.6	0.0	0.0	0.0	16.4	14.3
B.Sc. and Pre-D.D.S.	40.4	38.5	0.0	7.7	26.1	7.7	33.5	46.1
B.Sc.—Household Economics	70.0	84.6	3.8	0.0	0.0	0.0	26.2	15.4
B.Com. and B.A., B.Com.	43.0	70.0	0.0	0.0	18.2	20.0	38.8	10.0
B.Sc.—Agriculture	68.0	85.7	2.7	0.0	2.7	0.0	26.6	14.3
B.Sc.—Pharmacy	44.0	0.0	3.2	0.0	12.5	66.7	40.3	33.3

*Includes students who were granted supplementals, deferred finals, etc.

TABLE IV

UNIVERSITY SUCCESS OF 422 MATRICULANTS AS RELATED TO LENGTH OF TIME TO COMPLETE MATRICULATION

Degree of Success	3 years		4 years		5 years	
	Number of Cases	Per Cent of Cases	Number of Cases	Per Cent of Cases	Number of Cases	Per Cent of Cases
Passed all	143	67.8	127	66.5	9	45.0
Failed one or more but granted supps	48	22.8	38	19.9	6	30.0
Recommended to Cat. II	9	6.6	7	9.9	1	20.0
Recommended to Cat. IV	5		12		3	
Withdrew	3	.....	3	.....	1	.....
Deferred Finals	2	2.8	2	3.7	0	5.0
Partial Students	1	.....	2	.....	0	.....
Total	211	100.0	191	100.0	20	100.0

Summary

Of the 821 students who graduated from the Alberta high schools in 1949 with University matriculation, 422, or 51 per cent enrolled in the 1949 - 50 session at the University of Alberta and its affiliates. The investigation sought to determine the activities and achievements of these students in their freshman year and to clarify the factors which influenced their achievements. The data reveal the following:

1. The 1949 matriculants comprised only 37 per cent of the freshman registration at the University of Alberta.

2. The Faculty of Education attracted 28 per cent of the 422 matriculants into the degree and certification program. All faculties except Engineering, Arts and Science, and Medicine attracted less than ten per cent each.

3. Of the female matriculants who entered the University of Alberta, 49 per cent chose teacher-education programs. Of the 254 male matriculants entering the University of Alberta, 45 per cent chose either Engineering or Science programs.

4. The programs in Arts, Medicine, Dentistry, Commerce, Pharmacy, and the Junior Elementary and Intermediate Certification program in the Faculty of Education attracted matriculants whose group grade XII averages were below the average of 69.1 per cent for the 422 matriculants.

5. As a group, the 422 students who matriculated in 1949 had a better academic record than the total group of students who were classified as first-year students in 1949 - 50. However, the 1949 matriculants registered in Medicine, Dentistry and Pharmacy failed to achieve the same standard as the total first-year class in those programs.

6. In 97 per cent of the cases, students who obtained an "H" grading on the grade IX examinations completed high school in the minimum of three years and had a higher average in the seven grade XII subjects than did students obtaining an "A" or "B" rating in grade IX.

7. Students requiring only three years to complete high school obtained a higher grade XII average and repeated fewer subjects than students who completed high school in four or more years.

8. Students requiring only three years to complete high school achieved a greater degree of success in their freshman year at the University than students requiring four or more years.

Findings — Questionnaire Group

The Questionnaire group, consisting of 399 individuals and yielding 201 replies, was divided into seven sub-groups for analytical purposes. The categories were as follows:

1. Other University—those who entered other accredited universities in Canada and the United States.

2. Nursing—those who entered the nursing profession as trainees (not including those who entered the degree program at the University of Alberta).

3. Pharmaceutical Intern—those serving pharmaceutical internship prior to entering the School of Pharmacy at the University of Alberta.

4. Secretarial Training—those who were undergoing or who had completed a secretarial course.

5. Miscellaneous Training—those who were taking further training of some description but who did not fit into any of the previously mentioned groups.

6. Employed—those who entered the workaday world directly.

7. Unclassified—all those not attending the University of Alberta and not replying to the questionnaire.

Influences favoring matriculation

Members of the Questionnaire group were asked what motivating factors were the most important in influencing them to complete their matriculation. "Individual desire" or "own choice" was mentioned 97 times. "Desire to continue to university" was indicated 72 times. "Parental influence" was mentioned in 47 cases, "teacher influence" in 26, "no other choice available in school program" and "other reasons" in five. It should be pointed out that an individual was free to indicate two or more factors if he felt that they were of equal weight.

Financial considerations

In 46.3 per cent of the cases it was indicated that financial difficulties prevented individuals from attending a university or college. Six additional persons pointed out that they selected universities or colleges outside the Province of Alberta because it was financially advantageous for them to do so. Scholarships, cheaper accommodation, and shorter courses were some of the reasons given for selecting post-high school training away from Alberta. In all, 99 persons deferred further training at the University of Alberta because of some degree of financial burden. If this trend were true for the entire 399 senior matriculants in the Questionnaire population, it might be assumed that approximately 197 persons of the total year's matriculants (or 49.4 per cent) did not proceed to further study at the University of Alberta because of some financial handicap.

TABLE V

PREFERRED FINANCIAL ASSISTANCE OF 78 MATRICULANTS

Type of Assistance	Number of Indications
A scholarship of $200	9
Free tuition	20
Free room and board	32
An interest-free loan	17
Part-time work	21
Other assistance	3
Total	102

A total of 78 persons expressed opinions as to the preferred type of assistance which would enable them to attend the University of Alberta. These opinions are shown in Table V. Equal preference for two or more types of assistance gave a total of 102 choices.

Intention of further study

In fifty-two cases (25.9 per cent of the total) it was indicated that the respondents definitely planned to attend the University of Alberta within the two-year limit set by the questionnaire. In twenty-four additional cases (11.9 per cent) it was indicated that they might enrol in the University within the two-year period. Eighty-six (42.8 per cent) indicated that they did not receive sufficient information about the University of Alberta while attending high school.

Academic achievement

A summary of grade XII marks by sex and total population for various categories is given in Table VI.

TABLE VI

AVERAGE OF GRADE XII MARKS FOR GROUPS NOT ATTENDING UNIVERSITY OF ALBERTA

Group	Male	Female	Total
Other University	70.5%	69.6%	70.2%
Nursing	.....	66.3%	66.3%
Pharmaceutical Intern	64.8%	63.8%	64.4%
Secretarial training	71.0%	67.3%	67.5%
Miscellaneous training	68.4%	65.7%	67.4%
Employed	66.5%	66.6%	66.6%
Unclassified	65.2%	66.4%	65.8%
Total—Non U. of A. population	66.4%	66.6%	66.5%

It is of interest to note that the average of the grade XII marks for the total Questionnaire population is 66.5 per cent, 2.6 per cent lower than the average of the grade XII marks for the total University of Alberta population. The grade XII average of the Pharmaceutical Intern group is 3.8 per cent higher than that of those students who enrolled in the School of Pharmacy directly from high school in 1949. Students who enrolled in the B.Sc. program of nursing at the University of Alberta immediately

following matriculation in 1949 had an average grade XII standing of 71.3 per cent as compared with 66.4 per cent for the Nursing group in the Questionnaire population. Of the 399 students in the total Questionnaire population, 125 had individual grade XII averages above the 69.1 per cent grade XII average of the total University of Alberta population.

Recommendations

1. That the University of Alberta maintain records of the sources of freshman registration so that enrolment may be more accurately anticipated each year.

2. That the factors of grade IX rating and the years required to complete high school be given consideration in assessing the suitability of the matriculant for university training.

3. That a program of entrance selection be adopted to choose those students most likely to meet restrictive minimum average as established in such faculties as Law and Medicine.

4. That the University of Alberta and the Department of Education promote a scheme of public relations which will encourage more students with university matriculation to come to university.

5. That some form of assistance be provided for matriculants who have the ability for university work, and that this form of assistance involve:

(*a*) Reduction of the cost of room and board through work performed by the matriculant at the University.

(*b*) Interest-free loans to likely prospects.

(*c*) An approved scheme of scholarship assistance.

6. That the University of Alberta adopt a more vigorous campaign to attract potential students in competition with industry, trade schools, business colleges, and other training institutions in the post high school development of our youth.

AN ANALYSIS OF THE EDITORIAL TREATMENT OF EDUCATION IN THE ALBERTA PRESS

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Editorial opinions and policies are important in education. The editorial columns of our newspapers both mold and reflect the public will, upon which the continuing function of education is dependent.

An understanding of editorial opinion should help educators to get a clearer view of public attitudes toward their aims, their methods, and their problems. The result should be a finer definition of the issues on which there is disagreement or misunderstanding between educator and layman, thereby enabling workers in the schools to offer a clearer public interpretation of their function. A better informed public and press would then be in a position to offer more wholesome and constructive criticism.

The material for the present study was obtained by examining the editorials of the six daily newspapers of the province—*The Calgary Albertan, The Calgary Herald, The Edmonton Bulletin*[1], *The Edmonton Journal, The Lethbridge Herald, The Medicine Hat Daily News*—during a period of five years, from January 1, 1946, to December 31, 1950. All editorials on education were classified in order to make possible a description of the volume and nature of the comment.

Volume of Comment

In the six daily newspapers, representing approximately 64 per cent of the total circulation in the province,[2] the editorials on education numbered 883 in five years. This number constitutes about three per cent of all editorials on all topics during this period in these newspapers.

Is this an adequate share of attention to education? The question is, of course, relative to the many problems clamoring for public attention. But if education is as important in the lives of our people as editors attest in their columns, editorial attention to education seems meagre enough.

Nature of Comment

Table I indicates the frequency of mention of the major topics in each newspaper. Higher education, and educational costs and

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1This newspaper has now ceased publication.

2**Canadian Almanac and Directory,** 1950, p. 773.

finance rank ahead of the rest in popularity with editors. Four of the six newspapers allotted the largest portion of their space to higher education, while the other two showed educational finance at the head of the list.

Is the editorial treatment of education favorable or unfavorable? Only in matters of finance and curriculum does the amount of adverse comment outweigh that which is favorable. On the whole, the press is clearly striving to stimulate maximum efficiency in education.

TABLE I

FREQUENCY OF DISCUSSION OF MAJOR TOPICS IN SIX ALBERTA NEWSPAPERS, 1946-1950

Topic	CH	CA	EB	EJ	MHDN	LH	TOTAL
Higher education	23	29	50	120	6	28	256
Finance	17	15	7	19	29	38	125
Curriculum	10	15	17	17	19	20	98
Teachers	16	13	34	25	0	9	97
Methods, procedures	6	6	12	21	16	10	71
Administration	6	18	5	14	5	5	53
Adult education	1	1	14	21	9	5	51
Buildings, plant, equipment	3	3	6	17	3	17	49
Vocational education	7	1	5	4	8	12	37
Value (purposes, efficiency) of education	7	2	2	5	3	6	25
Pupils	3	0	4	1	4	2	14
Extracurricular activities	1	2	1	1	1	1	7
TOTAL	100	105	157	265	103	153	883

NOTE: CH-Calgary Herald; CA-Calgary Albertan; EB-Edmonton Bulletin; EJ-Edmonton Journal; MHDN-Medicine Hat Daily News; LH-Lethbridge Herald.

Several questions of great concern to educators are, however, largely ignored. Promotion policies, education method, sex education, treatment of controversial issues in the classroom, provision for individual differences, guidance and counseling, student interests

and needs, business education, health services, and specific school subjects receive scant attention in editorial columns. The neglect of these and other areas of educational endeavor in editorial discussion suggests a lack of information on what the schools are trying to do. So does the obvious lack of sympathy for some of the activities included in the curriculum, the lack of recognition given to public school adiminstrators, and the common editorial misconception that the schools have forgotten the "three R's." From this it follows that there is a need for some method whereby newspaper editors and the public at large can learn what the schools are doing, or are failing to do, about many things.

Higher education

In sheer quantity the editorial comment on higher education exceeds that on any other topic, although much of it tends merely to repeat conventional views. The press of the province, while appreciative of university education, alleges that it is over-specialized. It is felt that too much emphasis is being placed on technical training with a consequent neglect of the cultural aspects of education. The university is reminded that its function is to educate, not merely to turn out skilled technicians. Editors vigorously urge a revision of higher education, with greater stress on the cultural or spiritual phases of learning so as to achieve a better balanced, more rounded education. They fail, however, to make any significant suggestions regarding course offerings.

Restrictions imposed by some faculties on the number and type of students that can be enrolled each year are disparaged by the daily newspapers of the province. They feel that a genuine need exists for all professional services, and that facilities should be expanded to overcome this deficiency. Professional groups which foster such restrictive practices are chastised.

The method of instruction at most universities comes under the scrutiny of some sections of the press who deplore the excessive note-taking it makes necessary. Uninterrupted addresses by professors and verbatim copying by students are criticized. It is suggested that professors who prepare their work on paper should have it mimeographed and distributed to the class in advance, so that the lecture period could be devoted to an elaboration or discussion of the prepared statement.

Editors are well aware of the need for universities to increase their revenue if they are to continue to fulfill their obligation to society. Generally, it is believed that the provincial government should come to the assistance of the University of Alberta by means of increased grants. Federal aid, however, is not considered

advisable because of the dangers of uniformity or restriction. Increased fees, though approved, are conceived as merely nibbling at the problem of increased costs. There is evidence of concerted effort to increase the number of scholarships available to deserving students. Governments, private individuals, business and industry are all urged to contribute so that no worthy students are deprived of a university education.

An expansion of university facilities is proposed. To the newspapers in the southern part of the province this means decentralization, with the establishment of a branch university in the south; to the northern newspapers it means the expansion of existing facilities. The nature of the extension of university facilities is the most controversial issue in higher educaton.

Of no small importance is the fact that in four of the six newspapers the favorite education editorial theme was higher education. Elementary and secondary education directly affect the lives of the vast majority of Alberta's citizens. Yet one-fourth of the total editorial comment on education has to do with university education.

The volume of comment on this topic may be the result of the more highly publicized nature of university activities. Public school administrators might well consider the value of increased attention to publicity in their field.

Finance

Of perhaps greater importance is the interest of the press in the money side of educational problems. The topic of educational finance not only ranks second in popularity with editors, but it also pervades their discussion of such subjects as teachers, school plants, and administration. It may be stated as a fact that the financial apects of education most often claim the attention of the press.

Editors point with considerable frequncy to the increasing expenditures on education, putting it in the class of big business. They are, on the whole, sympathetic toward the problem facing school authorities as a result of the rising cost of education, and are helpful to educators in presenting their problems to the public.

Re-examination of the methods of financing education throughout the province is urged. Editors are as one in deploring the ineffectiveness of present methods, and in claiming that the present tax base should be broadened to reduce the tremendous burden on property and to spread the load mor equitably. Governments are rebuked for their failure to assume their rightful responsibilities by paying a much greater portion of the cost of education. It is urged that since education is a matter of concern to the state as a

whole, its availability should no longer be limited by the taxable capacity of separate areas.

Thus the press is insistent that the provincial government pay at least fifty per cent of the cost of education. It attempts to arouse the public to condemn the inequitable distribution and paucity of present government grants. Federal aid, while highly favored in the realm of technical education, is thought to be restrictive. In general public education as in higher education, some editors are wary of the uniformity and control they believe to be implicit in the application of federal aid. Others believe we have nothing to gain from it, as the people of Alberta are capable of accomplishing just as much by themselves.

Editors cannot agree on the financial implications of the County Act. In some quarters it is felt that the county system should be given a trial to see if it will reduce costs, while in others there is the conviction that education would suffer even greater privation under such a regime.

The support of education in the press is obviously genuine, and based on a secure conviction of educational values. Often there is a penetrating analysis of financial problems, and vigorous support for genuine reform. Editors appear to be familiar with what careful students have learned about educational finance, and are placing the issues squarely before the public.

School boards

Editors recognize the difficulty of the tasks confronting school boards, and as a rule commend them for meeting their responsibilities in an exemplary manner. There is strong tendency to support the sovereign rights of school boards whenever they are threatened. At the same time, anything suggesting the abuse of independence, and anything resembling secrecy or lack of responsiveness to the public will is seriously scored by certain editors.

The divergence of opinion about the financial aspects of the County Act is repeated with reference to administration as such. One newspaper feels that it will make for more efficient operation; others protest dangers of centralized control and financial vulnerability. The press generally opposes the County Act, believing it to be a real threat to educational efficiency and freedom.

Administrators

The treatment of education in the Alberta press suggests that the administrative group in our schools have failed to impress newspaper editors, at least, with their leadership. There are several editorial references to administrators, but practically all of them

are to the heads of institutions of higher learning. References to these persons indicate a respect for them as leaders in the life of the province. No such regard for public school administrators is evident.

The almost complete lack of editorial comment on the latter may be the result of failure on the part of editors to recognize the valuable nature of the services rendered by public school administrators. Or it may be owing, in part, to the very nature of the public school administrator's duties which, when performed satisfactorily, do not occasion public interest. It may also be explained in terms of the possibility that administrators of the public schools have failed to be as useful or as influential as they could have been. Whatever the cause, the sobering fact is that the work of principals and superintendents does not seem to have made much impression on newspaper editors. Public school administrators might well pause to examine their activities in an effort to determine why this is so.

Teachers

If newspaper comment reflects the public's attitude toward the personnel of schools, it must be acknowledged that the general feeling toward teachers is good. Their essential position in a democratic civilization is recognized, and their rights as individuals jealously defended.

The press, at any rate, consistently urges an increase in teachers' salaries to a level commensurate with the importance of their job. Seldom do editors imply that the salaries of teachers are at all adequate. Apparently teachers have convinced editors, if not school boards, of the legitimacy of their salary demands. Some editors do, however, distinguish between the salary paid to the real professional and that paid to the inexperienced or inept teacher. It is suggested that the inexperienced and inept often stand in the way of those who are entitled to professional rating and higher salaries.

Present low salaries are viewed as the crux of the educational problem throughout Canada, and as being directly reflected in the existing teacher shortage. The opinion is commonly expressed that the solution to problems of teacher shortage and teacher status is to be found by increasing salaries to the point where more stringent requirements for entrance into the profession can become operative.

Unanimity also exists on the teacher training issue. The press is convinced that teaching is an arduous task requiring intensive preparation and consummate skill. As a result it is extremely critical of any attempts to decrease the amount of basic training

required by teachers. A period of at least two years, but preferably more, is strongly advocated.

Although a genuine friendliness for the teacher is revealed in this investigation, certain editors appear somewhat reluctant to grant teachers the professional status to which they aspire. This hesitancy is based not only upon the belief that the general calibre of the teaching body is unworthy of such recognition, but that the procedures by which teachers solve their problems are not always those associated with a profession. The feeling is that many of the teachers' problems are of their own making, resulting from their failure to organize themselves into a truly professional body and set up their own standards.

Expansion of education

Editors insist on equality of opportunity in education. Thus they fully support the expansion programs being undertaken at all levels of our educational system. Belief in the decentralization of educational facilities is evidenced by a vociferous demand by newspapers in the southern half of the province that a branch university and a school of agriculture be established in that area.

Vocational education

While preferring a "cultural" curriculum, editors recognize the merits of vocational education to bridge the gap between school and life. They urge reorganization of the program in vocational education, with more schools for technical training strategically placed throughout the province.

Adult education

The press is remarkably alert to the possibilities of adult education. Of significance is the conviction that the school should assume a major role in providing recreational and educational leadership for the community as a whole. The opinion that the school should not be restricted to the traditional task of training the young is a direct challenge to educators to broaden the scope of the educational program, and to make the school a more powerful and direct influence for the betterment of life in the whole province.

Curriculum

In the attitude of the press toward the curriculum, two points are outstanding. First is the attention given to this topic: the sheer volume of comment shows that what is taught in the schools is of great interest to editors. The second is the prevailing lack of understanding of the nature and purposes of many of the elements criticized. Most editors seem not to appreciate the factors which enter into modern curriculum planning.

Numerous editorials question the efficiency of the curriculum, claiming that school graduates lack competence in fundamental processes, and questioning the political, social, and economic leadership provided for the province by its schools. Attacks are launched at "progressive education," at "fads and frills." A return to "the fundamentals" is recommended. Editors tend to deplore the widening of subject fields, to condemn specialization, and to attack educators for becoming "too practical." From the primary grades to university they propose a mental-discipline concept of education designed to provide what is thought to be a well-rounded education. Provision for individual differences among students is frequently regarded as soft pedagogy.

It is evident that traditional views of education are firmly held by editors. If educators are to gain support for more modern views, they must launch a program to acquaint the public with the motives underlying the changes in Alberta's educational system during the past two decades.

Suggestions to Educators

There are apparent relationships between educational policy in this province and the opinions expressed in the editorial columns of Alberta newspapers. In 1946 the press violently opposed a bill introduced in the legislature giving the Minister of Education control over school board secretary-treasurers. The bill was withdrawn. Increasing financial contributions to education by the government have always been strongly urged by editors. The establishment of the Calgary Branch of the University of Alberta, and recent curriculum revisions designed to improve mastery of the "three R's" are in accordance with editorial points of view.

It would, of course, be unsound to generalize broadly from the above examples. The government shelved its proposal to shorten the teacher-training program in 1946, but implemented a similar proposal in 1954. The opposition of the press was not less vigorous in 1954 than in 1946.

Nevertheless it does appear that editors succeed in reflecting and directing public opinion about education to a significant degree. Their statements must therefore be of concern to educators, since education is a public function. Workers in the schools might well profit from constant and careful perusal of opinions expressed in newspaper editorials.

With the findings of this study in mind, the following suggestions are offered to educators for their consideration:

1. That, since education is dependent upon the public will for its continuing function, they cultivate an awareness of the public

viewpoint on education, and that newspaper editorial columns be examined as one indication of the public viewpoint.

2. That steps be taken to disseminate accurate information to the public about educational aims, curriculum, and methods.

3. That preparatory to the introduction of new educational policies, new courses of study, new methods, or any new project, the public be adequately informed of their purposes in an effort to enlist its support.

4. That the school endeavor to make itself a continuing and influential part of the ordinary life of Alberta by assuming greater responsibility for adult education.

5. That the teaching body take action to make itself truly worthy of higher status by increasing the calibre of its members, establishing its own standards, and adopting a still more professional attitude toward the solution of its problems.

6. That educators, particularly administrators, improve their status by launching a program designed to acquaint the public with the value of the services they render.